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## **SEMIANNUAL GROUNDWATER MONITORING REPORT**

**THE MONADNOCK COMPANY  
18301 ARENTH AVENUE  
CITY OF INDUSTRY, CALIFORNIA**

October 1995

## **1.0 INTRODUCTION**

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This report summarizes the sampling procedures and analytical results for groundwater monitoring conducted in August 1995 at the Monadnock Company (Monadnock) facility. TRW Inc. (TRW) conducts semiannual monitoring of eight existing groundwater wells at the Monadnock facility.

### **1.1 Background**

The Monadnock facility is located at 18301 Arent Avenue in City of Industry, California (Figure 1-1). TRW used the former Monadnock facility to fabricate fasteners and electronic hardware from February 1968 through October 1980. Previous manufacturing processes used at the facility included degreasing, heat treating, and metal plating. Volatile organic compounds (VOCs) have been detected in groundwater beneath the facility and include 1,1-dichloroethene (1,1-DCE), 1,1-dichloroethane (1,1-DCA), chloroform, 1,2-dichloroethane (1,2-DCA), 1,1,1-trichloroethane (1,1,1-TCA), trichloroethene (TCE), 1,1,2-trichloroethane (1,1,2-TCA), and tetrachloroethene (PCE). In addition, cadmium, chromium, and cyanide have been detected in the groundwater.

### **1.2 Hydrogeologic Conditions**

The Monadnock facility is located in the southern San Gabriel Basin, a broad piedmont alluvial plain occupying the northern portion of the Los Angeles Basin. The site lies within the Puente Valley, a northwesterly-oriented sub-basin that merges with the main San Gabriel Basin approximately five miles northwest of the site. The Monadnock site and vicinity are underlain by Quaternary alluvial deposits that comprise the basinfill sequence of the San Gabriel Basin. The approximate depth to bedrock beneath the alluvial sequence in this area of the Puente Valley is about 100 feet. Bedrock of the Puente Valley is comprised of relatively impermeable sedimentary rock of Tertiary age.

Alluvial stratigraphy within the Puente Valley is complex and lithologic units are laterally discontinuous. Local and regional geologic data indicate the stratigraphy is comprised of an interfingering sequence of clays, clayey to silty sands and clean sands, and clayey to sandy gravels.

The first occurrence of groundwater beneath the site and vicinity is approximately 30 to 33 feet below ground surface (bgs), generally near or just below the base of a sand unit (designated the "upper" sand) that contains abundant gravel and occasional silty intervals. Beneath the upper sand unit, a discontinuous silty to sandy clay lens of variable thickness (generally 10 to 15 feet) overlies a deeper sand unit (designated the "lower" sand) that is silty to clayey in nature, and also contains abundant gravel. This lower sand generally extends from a depth of about 40 feet to a depth up to about 85 feet bgs, according to lithologic data from the two deepest boreholes advanced onsite [borings MW-10 (abandoned in 1991) and MW-11]. Below a depth of about 85 feet, a clean gravelly sand occurs, the thickness of which has not been investigated.

Seven monitoring wells in the site area extend to depths between 45 and 60 feet bgs and are screened within the upper sand unit, the silty clay lens (where present), and a portion of the underlying lower sand unit. One monitoring well, MW-11, extends to a depth of 97 feet and is screened within the lower sand unit and the underlying clean gravelly sand encountered at a depth of 85 feet.

The direction of groundwater flow beneath the site and vicinity is generally to the west-southwest, and is influenced primarily by the structural orientation of the Puente Valley sub-basin.

### **1.3      Groundwater Monitoring Program**

The groundwater monitoring program for the site includes seven monitoring wells installed prior to 1995 (MW-1 through MW-4, MW-7, MW-8, and MW-11), in addition to the new monitoring well installed at the Presto Food Products site in August 1995 (MW-12). Groundwater samples are analyzed for halogenated volatile organics by EPA Method 601/8010, total chromium and cadmium by EPA Method 3005/6010, and total cyanide by EPA Method 335.2/9010. During the August 1995 monitoring event, all eight wells were sampled using the field procedures described in Section 2.0.

## 2.0 FIELD PROCEDURES

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TRW personnel conducted the August 1995 monitoring event. Groundwater samples were collected from the eight monitoring wells on August 23, 1995. Static groundwater levels in wells MW-1 through MW-4, MW-7, MW-8, MW-11, and MW -12 were measured on August 22, 1995. An electronic sounder was used to measure the depth of water below the top of the respective well casing to the nearest 0.01 foot. Water-level elevations for each of the wells are discussed in Section 3.2.

Each monitoring well was purged of a minimum of three well casing volumes prior to sampling. Well purging was accomplished using a 3.5-inch diameter PVC bailer. Measurements of pH, specific conductivity, and temperature were recorded at periodic intervals during the purging of each well. Water-level measurement, well purging, and well sampling data were recorded for each well on water sample logs. Copies of these logs are contained in Appendix A.

Groundwater levels were again measured in each of the wells after purging. Groundwater samples were collected from each well only after either the water level had recovered to at least 80 percent of its level measured before purging had begun, or a minimum of three hours had elapsed since the conclusion of well purging.

Groundwater samples were collected with a Teflon bailer, transferred to appropriately-sized and labeled bottles supplied by the analytical laboratory, stored in a portable ice chest, and cooled with ice until delivery to the analytical laboratory. Groundwater samples collected for analysis of halogenated volatile organics (EPA Method 601) were transferred to 40-milliliter VOA vials; groundwater samples collected for analysis of total chromium and total cadmium were transferred to 200-milliliter plastic bottles; groundwater samples collected for analysis of cyanide were transferred to 300-milliliter plastic bottles. Each of the VOA vials was completely filled in a manner such that no headspace existed.

Duplicate samples were collected from each well, though in most instances only one sample was analyzed by the laboratory. The duplicate samples were for emergency and/or confirmation purposes.

Groundwater samples were delivered under chain-of-custody documentation to CKY Inc. (CKY), a California-certified hazardous waste analytical laboratory located in Torrance, California, for chemical analysis.

Purging and sampling equipment was cleaned between use in each well and suspended from a new nylon rope or monofilament line to minimize the potential for cross-contamination. Decontamination was conducted with a non-phosphate detergent wash and followed by three deionized water rinses.

Wastewater, generated from purging and decontamination activities, was collected in 55-gallon drums. The drummed wastewater was then stored onsite for later disposal by TRW.

## **3.0 RESULTS AND DISCUSSION**

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### **3.1 Field Parameters**

The field parameters measured in each well at the completion of purging are listed in Table 3-1. These parameters had stabilized to within ten percent for successive measurements at the completion of purging in all wells.

### **3.2 Water-Level Elevations**

Historic water-level elevation data for the eight monitoring wells are presented in Table 3-2. The historic data include the measured depths to groundwater and the calculated water-level elevations recorded for each well since June 1994, in addition to the current data recorded in August 1995.

Water-level elevation contours for the uppermost saturated interval beneath the site were generated using the August 1995 data (Figure 3-1). The wells used in constructing these contours included only the seven wells completed in the shallow saturated interval beneath the site (MW-1 through MW-4, MW-7, MW-8, and MW-12). Well MW-11 was not used in constructing the contours because this well is completed in a deeper interval beneath the site.

The water-level elevation contours for August 1995 indicate that the direction of groundwater flow in the shallow interval is to the west-southwest at a hydraulic gradient of about 0.008. This direction of groundwater flow and the magnitude of the gradient are consistent with previous monitoring events. A vertical hydraulic gradient is also apparent beneath the site between the intervals at which the shallow wells and the deeper well are completed. Based on comparison of the water-level elevation in deeper well MW-11 [377.65 feet mean sea level (MSL)] with water-level elevations in shallow interval wells MW-2 and MW-8 (378.17 feet MSL and 378.25 feet MSL, respectively), the vertical hydraulic gradient is in the downward direction.

### **3.3 Laboratory Analyses and Results**

Groundwater samples were analyzed for halogenated volatile organics by EPA Method 601/8010, total chromium and cadmium by EPA Method 3005/6010, and total cyanide by EPA Method 335.2/9010. Results of the August 1995 analyses, in addition to historic analytical results for previous monitoring events, are presented in Table 3-3. Copies of the chain-of-custody forms and the analytical laboratory reports are presented in Appendix B.

#### **3.3.1 VOC Results**

The August 1995 analytical results indicate that the VOCs currently present in groundwater beneath the site and vicinity include 1,1-DCE, 1,1-DCA, chloroform, 1,2-DCA, TCE, and PCE. Only shallow wells MW-2, MW-7, MW-8, and MW-12, and deeper well MW-11, are presently impacted by VOCs at concentrations that exceed regulatory standards. In the four shallow wells impacted, total VOC concentrations range from 27 ug/l in well MW-8 to 821 ug/l in well MW-12. In deeper well MW-11, the total VOC concentration is 55 ug/l. Upgradient wells MW-1 and MW-4 and

crossgradient well MW-3 are not impacted by VOCs, other than trace concentrations of 1,1-DCE (1.1 to 1.5 ug/l) that do not exceed regulatory standards.

The August 1995 VOC concentration data indicate that the plume of impacted groundwater beneath the site is oriented in a southwesterly direction, similar to the direction of groundwater flow. The plume extends offsite in the downgradient direction to the location of the Presto Food Products site. The axis of the plume appears to be through the area of onsite well MW-2 and offsite well MW-12, based on the presence of the highest concentrations of VOCs in these two wells. The plume is limited in lateral extent, as crossgradient well MW-3 is not impacted, and crossgradient well MW-8 exhibits a decrease in total VOC concentrations of one order of magnitude, relative to well MW-2. The VOC plume concentrations appear to attenuate with depth, as deeper well MW-11 exhibits appreciably lower VOC concentrations than shallow wells MW-2 and MW-7.

The historic groundwater analytical results for the site indicate that there has been a decreasing trend in VOC concentrations since monitoring began in July 1986. In well MW-2, concentrations of 1,1,1-TCA have decreased to nondetectable levels from a maximum of 380 ug/l in July 1986, and TCE and PCE levels have decreased to 170 and 12 ug/l, respectively, from maximum levels of 710 and 770 ug/l, respectively. In well MW-7, more than half of the VOCs that have been historically detected are now at nondetectable levels, and TCE and PCE concentrations have exhibited a decreasing trend since March 1987. Similarly, the majority of the historically detected VOCs in wells MW-8 and MW-11 are now at nondetectable levels, and only 1,1-DCE and TCE are currently present at levels that exceed the regulatory standards (see Table 3-3). VOCs have been absent in wells MW-1, MW-3 and MW-4 since monitoring began, with the exception of several isolated occurrences when VOCs were detected at low concentrations that were generally below regulatory standards (see Table 3-3).

### **3.3.2 Metals and Cyanide Results**

The August 1995 analytical results indicate that cyanide and chromium are currently present in groundwater beneath the Monadnock site and vicinity; cadmium is currently not present at detectable levels. Chromium is present in five wells (MW-2, MW-7, MW-8, MW-11, and MW-12) at concentrations ranging from 13.3 to 164 ug/l; only the concentration in well MW-2 (164 ug/l) exceeds the regulatory standard of 50 ug/l. Cyanide is present in three wells (MW-2, MW-7, and MW-12) at concentrations ranging from 0.025 and 1.82 mg/l, respectively; there is currently no established regulatory standard for cyanide.

Historic metals and cyanide concentrations for the site are available only since August 1994. These data indicate that cadmium has been detected at the site on only one occasion (August 1994), and was present in only three wells (MW-3, MW-7, and MW-8) at concentrations below the regulatory standard (10 ug/l). Historic chromium results have been variable; in addition to the five wells that currently (August 1995) exhibit detectable chromium levels, the remaining three wells have also indicated the presence of chromium during previous monitoring events. However, only well MW-2 has exhibited chromium levels that exceed the regulatory standard, with the exception of the August 1994 chromium result for well MW-8 (135 ug/l). Historic cyanide results indicate that wells MW-2 and MW-7 have previously had detectable cyanide concentrations, although the concentrations in well MW-7 have shown an appreciable decrease since August 1994. In addition, well MW-4 was also previously impacted by cyanide in March 1995.

## **4.0 QUALITY ASSURANCE/QUALITY CONTROL**

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Field and laboratory quality assurance/quality control (QA/QC) procedures were employed during the August 1995 monitoring event, as during the previous compliance monitoring events, to document that the sampling results meet accepted QA/QC standards. The QA/QC procedures employed included 1) collecting and analyzing field samples to assess field QA/QC procedures, 2) preparing and analyzing laboratory samples to assess the performance of the analytical laboratory, and 3) conducting data validation in accordance with the protocols described below. Additional procedures employed in the field for QA/QC purposes included sequencing the sampling in such a manner that the wells with the lowest levels of contamination were sampled prior to those with the highest levels.

QA/QC samples collected or prepared for the August 1995 sampling event are listed in Table 4-1. The QA/QC samples collected in the field included one equipment blank. The QA/QC samples prepared by the analytical laboratory included one trip blank, in addition to numerous method blanks, matrix spike and matrix spike duplicates, and laboratory control samples. Table 4-1 contains a description of the collection and/or preparation procedures for each type of QA/QC sample.

### **4.1 Data Validation**

Laboratory results for the August 1995 monitoring event were reviewed in accordance with U.S. Environmental Protection Agency (EPA) guidelines for data validation (National Functional Guidelines for Organic Data Review, June 1991). The data validation process consisted of reviewing the laboratory results for the following parameters: 1) completeness of the data package, 2) compliance with EPA-required holding times, 3) surrogate recovery results for each well sample, 4) agreement of dilution factors with reported detection limits, 5) presence or absence of analytes in the equipment, trip, and method blanks, 6) percent recovery and relative percent difference results for matrix spike and matrix spike duplicate analyses, and 7) percent recovery results for laboratory control samples.

Based on guidance provided in the EPA guidelines, sample analytical data may be qualified as "J" (estimated), "UJ" (not detected-estimated), or "R" (rejected). Review of the laboratory data package for the August 1995 analyses indicated that no sample data required qualification during this sampling event.

Results of the data validation indicated that the laboratory data packages were complete, that no analysis holding times were exceeded, and that reported detection limits were consistent with the sample dilution factors. Additional data validation results are discussed in Section 4.2.

#### **4.2 QA/QC Sample Analysis Results**

The results of the QA/QC sample analyses for the August 1995 monitoring event are presented in Table 4-2. These results indicated that 1,1-dichloroethene, chloroform, and bromodichloromethane were detected in the equipment blank and the trip blank that accompanied the sample vials during transport from the field. The trip blank was not prepared by the laboratory, but was prepared in the field using the source water for equipment decontamination. It is believed that the contaminants found in the equipment and trip blank are preservatives commonly found in water purchased for use in sampling activities.

The laboratory method blank results indicated detectable concentrations of VOCs were not present. The results of the matrix spike and matrix spike duplicate (MS/MSD) pairs for VOCs all indicated percent recoveries and relative percent difference within acceptable limits. The percent recoveries for laboratory control samples were within acceptable limits.

## 5.0 SUMMARY

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During the August 1995 semiannual monitoring event at the Monadnock site, the seven previously existing monitoring wells and the new offsite monitoring well installed in August 1995 were included in the sampling program. Water levels were monitored in each well and groundwater samples were collected and analyzed for VOCs, chromium, cadmium, and cyanide.

The results of the August 1995 monitoring event indicate that water-level elevations continue to demonstrate a southwesterly direction of groundwater flow. A slight downward vertical gradient was also indicated by the August water-level data, similar to previous events.

The August 1995 analytical results indicate that the plume of VOC-impacted groundwater beneath the site is oriented in a southwesterly direction. The plume appears to be limited in lateral extent (crossgradient) and extends offsite in the downgradient direction to the Presto Food Products site. The August 1995 analytical results continue to exhibit the decreasing trend in groundwater VOC concentrations that has been observed at the site since monitoring began in 1986. In several wells (MW-7, MW-8, and MW-11), the majority of the historically detected VOCs are now at nondetectable levels, although the concentrations of TCE and 1,1-DCE continue to exceed the regulatory standards. Wells MW-2, MW-7, MW-8, MW-11 and MW-12 presently contain VOCs at levels that exceed regulatory standards.

The results of metals and cyanide analyses conducted during the August 1995 monitoring event indicate that chromium and cyanide are present in groundwater beneath the site and vicinity. Chromium concentrations exceed the regulatory standard in only one well (MW-2); there is no established regulatory standard for cyanide.

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CALIFORNIA REGIONAL WATER  
QUALITY CONTROL BOARD  
LOS ANGELES REGION

## SEMIANNUAL GROUNDWATER MONITORING REPORT

THE MONADNOCK COMPANY  
18301 ARENTH AVENUE  
CITY OF INDUSTRY, CALIFORNIA

October 1995

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**TABLE 3-1**  
**FIELD PARAMETERS AT COMPLETION OF PURGING**

WELL NUMBER	DATE	pH	SPECIFIC CONDUCTIVITY ( $\mu\text{mhos}/\text{cm}$ )	TEMPERATURE (°F)
MW-1	8-22-95	6.83	1608	76.1
MW-2	8-23-95	7.00	1546	73.3
MW-3	8-22-95	6.74	1533	73.1
MW-4	8-22-95	6.87	1484	75.3
MW-7	8-23-95	7.17	1238	74.0
MW-8	8-23-95	6.96	1389	73.5
MW-11	8-23-95	7.12	1210	74.4
MW-12	8-22-95	7.10	1684	75.2

**TABLE 3-2**  
**HISTORIC WATER-LEVEL ELEVATION MEASUREMENTS**

Well Number	Date Measured	Depth to Water (feet below top of casing)	Top of Casing Elevation <sup>(a)</sup> (feet, MSL)	Water Surface Elevation <sup>(a)</sup> (feet, MSL)
MW-1	Jun 94	32.27	412.68	380.41
	Aug 94	32.49		380.19
	Mar 95	31.82		380.86
	Aug 95	31.55		381.13
MW-2	Jun 94	30.25	408.01	377.76
	Aug 94	30.55		377.46
	Mar 95	29.73		378.28
	Aug 95	29.84		378.17
MW-3	Jun 94	30.21	408.52	378.31
	Aug 94	30.74		377.78
	Mar 95	29.86		378.66
	Aug 95	29.94		378.58
MW-4	Jun 94	32.80	412.95	380.15
	Aug 94	32.99		379.96
	Mar 95	32.28		380.67
	Aug 95	32.04		380.91
MW-7	Jun 94	31.35	409.16	377.81
	Aug 94	31.71		377.45
	Mar 95	31.03		378.13
	Aug 95	30.98		378.18
MW-8	Jun 94	31.25	409.00	377.75
	Aug 94	31.54		377.46
	Mar 95	30.95		378.05
	Aug 95	30.75		378.25
MW-11	Jun 94	31.59	408.93	377.34
	Aug 94	32.07		376.86
	Mar 95	31.26		377.67
	Aug 95	31.28		377.65
MW-12	Aug 95	30.50	406.91	376.41

<sup>(a)</sup> Elevations relative to mean sea level (MSL)





**TABLE 3-3 (Continued)**  
**HISTORIC GROUNDWATER ANALYTICAL RESULTS**

WELL NUMBER/ SAMPLE DATES	1,1-DCE ( $\mu\text{g/l}$ )	1,1-DCA ( $\mu\text{g/l}$ )	CFM ( $\mu\text{g/l}$ )	1,2-DCA ( $\mu\text{g/l}$ )	1,1,1-TCA ( $\mu\text{g/l}$ )	TCE ( $\mu\text{g/l}$ )	1,1,2-TCA ( $\mu\text{g/l}$ )	PCE ( $\mu\text{g/l}$ )	CADMIUM ( $\mu\text{g/l}$ )	CHROMIUM ( $\mu\text{g/l}$ )	CYANIDE ( $\text{mg/l}$ )
DRINKING WATER STANDARD	6	5	N.E.	0.5	200	5	32	5	10	50	N.E.
<b>MW-11/</b>											
JUL 86	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SEP 86	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
NOV 86	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FEB 87	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
MAR 87	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
SEP 87	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
FEB 88	N.A.	N.A.	N.A.	N.A.	ND	26	N.A.	ND	N.A.	N.A.	N.A.
JAN 89	N.A.	N.A.	N.A.	N.A.	ND	20	N.A.	200	N.A.	N.A.	N.A.
JUN 89	50	N.A.	N.A.	N.A.	ND	270	N.A.	10	N.A.	N.A.	N.A.
JAN 90	231	N.A.	N.A.	N.A.	ND	50	N.A.	5.5	N.A.	N.A.	N.A.
JUN 94	ND(1)	ND(1)	1.8	ND(1)	ND(1)	86	ND(1)	7	N.A.	N.A.	N.A.
AUG 94	ND(1)	16	ND(1)	ND(1)	ND(1)	49	ND(1)	4.7	ND(1)	13.0	ND(.01)
MAR 95	20.3	ND(1)	ND(1)	ND(1)	ND(1)	59.6	ND(1)	4.1	ND(5)	13.1	ND(.01)
AUG 95	12	ND(1)	ND(1)	ND(1)	ND(1)	43	ND(1)	ND(1)	ND(5)	13.3	ND(1)
<b>MW-12/</b> AUG 95	250	6.7	4.1	7.0	ND(1)	540	ND(1)	13	ND(5)	25.6	0.502

**NOTES:**

- (1)    1,1-DCE   - 1,1-dichloroethene  
 1,1-DCA   - 1,1-dichloroethane  
 CFM   - Chloroform  
 1,2-DCA   - 1,2-dichloroethane  
 1,1,1-TCA   - 1,1,1-trichloroethane  
 TCE   - Trichloroethene  
 1,1,2-TCA   - 1,1,2-trichloroethane  
 PCE   - Tetrachloroethene
- (2)   Drinking water standards are Maximum Contaminant Levels (MCLs) as established by the United States Environmental Protection Agency or Drinking Water Action Levels as established by the California Environmental Protection Agency.
- (3)   N.E.   - Drinking water standard (MCL or Action Level) has not been established.
- (4)   ND( )   - Not detected at the concentration shown in parentheses.
- (5)   N.A.   - Analyte was not analyzed.

**TABLE 4-1**

**QUALITY ASSURANCE/QUALITY CONTROL SAMPLES  
AUGUST 1995 COMPLIANCE MONITORING**

Sample Type	Analysis Date	Description
<b>Field QA/QC Samples</b>		
<u>Equipment Blank</u> EQUIPMENTBLANK	9/03/95	Source water for equipment decontamination, collected after pouring through cleaned bailer following sampling of well W-3
<b>Laboratory QA/QC Samples</b>		
<u>Trip Blank</u> TRIPBLANK	9/03/95	Laboratory water blank that accompanies sample vials into the field (remains unopened) and is analyzed in same manner as the monitor well water samples.
<u>Duplicate Samples</u>		
MW-4-B	8/30/95	Duplicate sample that is analyzed in the same manner as the monitor well sample.
PTX06-1019-1276	8/25/95	
<u>Method Blanks</u>		
MBLK1W VAI027B	9/02/95	Laboratory water blank that undergoes same laboratory preparation procedures as the monitor well water samples.
MBLK2W VAI037B	9/04/95	
MBLK1W CHN015WB	8/30/95	
<u>Matrix Spike Samples</u>		
MW-1-A (MS)/MW-1-A (MSD)	9/05/95	Matrix Spike (MS) is a monitor well sample which is "spiked" with solution of known concentration and then analyzed in same manner as the "unspiked" well samples. Matrix spike duplicate is a second spiked sample prepared from same sample aliquot as the matrix spike sample.
PTX06-1019-1276	8/25/95	
ER-016	8/25/95	
<u>Laboratory Control Samples</u>		
LCS1W VAI027L	9/02/95	Prepared solution of known concentration that the laboratory uses as an equipment calibration check.
LCS1WD VAI027C	9/02/95	
LCS2W VAI037L	9/04/95	
LCS2WD VAI037C	9/04/95	
LCS1W CHN015WL	8/30/95	
LCS1WD CHN015WC	8/30/95	
LCS1W IPH042WL	8/25/95	
LCS1WD IPH042WC	8/25/95	

**TABLE 4-2**

**QUALITY ASSURANCE/QUALITY CONTROL SAMPLE RESULTS  
AUGUST 1995 COMPLIANCE MONITORING**

Sample Type	Results			
<b>Field QA/QC Samples</b>				
<u>Equipment Blank</u> EQUIPMENTBLANK	<u>Parameter</u>		<u>Concentration</u>	
	EPA 601		µg/L	
	1,1-DCE		1.1	
	Chloroform		6.8	
	Bromodichloromethane		1.8	
<b>Laboratory QA/QC Samples</b>				
<u>Trip Blank</u> TRIPBLANK	<u>Parameter</u>		<u>Concentration</u>	
	EPA 601		µg/L	
	1,1-DCE		1.4	
	Chloroform		7.3	
	Bromodichloromethane		2.1	
<u>Method Blanks</u>				
MBLK1W VAI027B	EPA 601		ND	
MBLK2W VAI037B	EPA 601		ND	
MBLK1W CNH015WB	EPA 335.2		ND	
<u>Duplicate</u>	<u>Parameter</u>	<u>Sample</u>	<u>Sample Duplicate</u>	<u>RPD</u>
MW-4-B	Cyanide	ND	ND	0
PTX06-1019-1276	Cadmium	5.3	6.13	15
	Chromium	37.4	33.4	11
<u>Spike Samples</u>	<u>Parameters</u>	<u>Percent Recovery (S/SD)</u>	<u>RPD<sup>2</sup></u>	
MW-1-A	1,1-DCE	119/118	1	
	TCE	119/121	2	
	Chlorobenzene	113/116	3	
PTX06-1019-1276*	Cadmium	111/n.a.	n.a.	
	Chromium	102/n.a.	n.a.	
ER-016	Cadmium	95/98	4	
	Chromium	97/100	4	

**TABLE 4-2 (Continued)**

**QUALITY ASSURANCE/QUALITY CONTROL SAMPLE RESULTS**  
**AUGUST 1995 COMPLIANCE MONITORING**

<b>Sample Type</b>		<b>Results</b>			
<u>Laboratory Control</u>	<u>Samples</u>	<u>Parameter</u>	<u>LCS Results</u>	<u>LCS True Value</u>	<u>Percent Recovery</u>
LCS1W VAI027L		1,1-DCE	20.10	20.00	101
		TCE	22.40	20.00	112
		Chlorobenzene	22.20	20.00	111
LCS1WD VAI027C		1,1-DCE	21.20	20.00	106
		TCE	23.40	20.00	117
		Chlorobenzene	21.70	20.00	109
LCS2W VAI037L		1,1-DCE	22.70	20.00	113
		TCE	23.10	20.00	115
		Chlorobenzene	19.10	20.00	96
LCS2WD VAI037C		1,1-DCE	23.90	20.00	119
		TCE	24.50	20.00	123
		Chlorobenzene	21.50	20.00	107
LCS1W CHN015WL		Cyanide	0.40	0.45	89
LCS1WD CHN015WC		Cyanide	0.41	0.45	92
LCS1W IPH042WL		Cadmium	946	1000	95
		Chromium	965	1000	97
		Cadmium	947	1000	95
LCS1WD IPH042WC		Chromium	961	1000	96

<sup>1</sup> - ND (1) indicates not detected at laboratory detection limit of 1 µg/l

<sup>2</sup> - Relative percent difference calculated as:

$$\frac{(\text{Sample value} - \text{duplicate value})}{(\text{Sample value} + \text{duplicate value})/2} \times 100$$

MS - Matrix Spike

MSD - Matrix Spike Duplicate

\* No spike duplicate was analyzed

## **FIGURES**



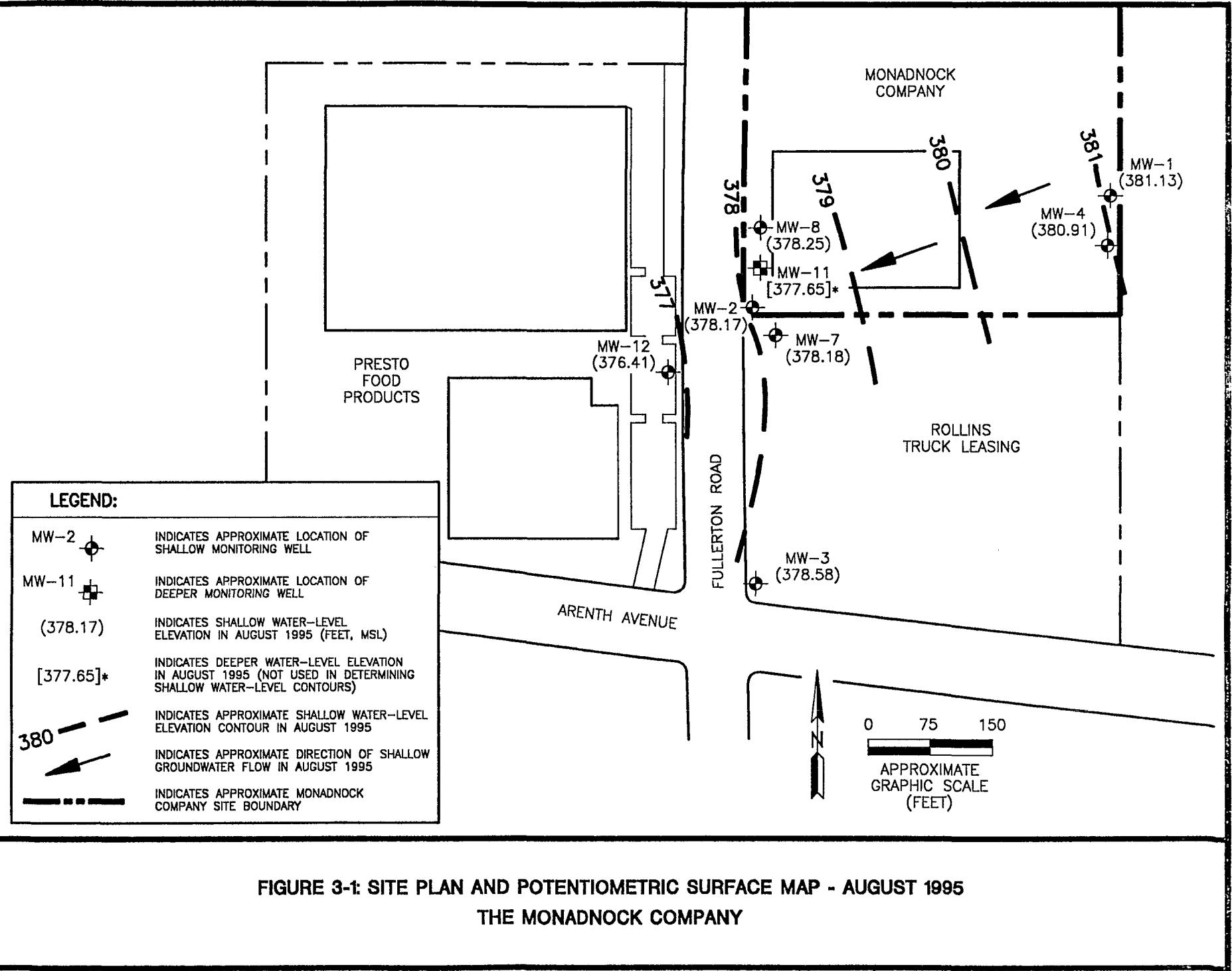


FIGURE 3-1: SITE PLAN AND POTENTIOMETRIC SURFACE MAP - AUGUST 1995  
THE MONADNOCK COMPANY

## **APPENDIX A**

### **WATER SAMPLE LOGS**

MONADNOCK

Groundwater Monitoring / H<sub>2</sub>O Levels

Date: 8-22-95

Collected by: BART WESSEL

Seq.	Well ID	H <sub>2</sub> O Level'	Total Depth'
1.	MW - 1	31.55	47.50
2.	MW - 4	32.04	48.80
3.	MW - 3	29.94	45.64
4.	MW - 8	30.75	51.53
5.	MW - 11	31.28	96.60
6.	MW - 7	30.98	56.40
7.	MW - 2	29.84	44.50
8.	PRESTO WELL MW - 12	30.50	49.48
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			

# WATER SAMPLE LOG

Project Name: MONADNOCK Date: 8-22-95  
 Well No. MW-1 Location: ON-SITE Collected by: WESSEL

Well Purging Method: 3.5" PVC BAILEY

Total Depth: 47.50 Height of Water Column: 16.03

Decon. Method: 1 WASH / 3 RINSE

Casing volumes to be purged: 2" (0.16 gal./ft.)    4" (0.65 gal./ft.)    6" (1.47 gal./ft.)

3 casing vol. x .65 gal./ft. x 16.03 ft = 31.25 gal.

Time	W.L. (ft.)	Purged (gallons)	Temp °F	mΩ	pH	Notes
1140	31.47	00				
1155		10	78.8	1660	6.84	H2O CROWN BROW
1201		20	77.3	1582	6.85	" "
1204		23	76.9	1614	6.82	" "
1206		26	76.7	1583	6.85	" "
1208		30	76.5	1609	6.83	" "
1212		32	76.1	1608	6.83	" "

Total Purged (gallons): 32.0 No. of Casing Volumes: 3

Well Sampling Method: 1.5" TEFLON BAILEY

Decon. Method: 1 WASH / 3 RINSE

Sample Container	Sample Number
2 - 40 ML. VAC VIALS	MW-1-A
1 - 1,000 ML. HOPE	MW-1-B
1 - 250 ML. HOPE	MW-1-C

Observations/Notes/Calibration record:

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# WATER SAMPLE LOG

Project Name: MONADNOCK Date: 8-22-95  
 Well No. MW - 3 Location: OFF - SITE Collected by: WESSEL

Well Purging Method: 3.5" PVC BAILER

Total Depth: 45.64 Height of Water Column: 15.78

Decon. Method: 1 WASH / 3 RINSE

Casing volumes to be purged: 2" (0.16 gal./ft.)    4" (0.65 gal./ft.)    6" (1.47 gal./ft.)

$$3 \text{ casing vol.} \times .65 \text{ gal./ft.} \times 15.78 \text{ ft} = 30.77 \text{ gal.}$$

Time	W.L. (ft.)	Purged (gallons)	Temp °F	mΩ	pH	Notes
1300	29.86	00				
1313		05	73.0	1568	6.66	H <sub>2</sub> O Cloudy Brown
1315		10	72.8	1564	6.65	" " "
1319		15	73.6	1549	6.65	" " "
1322		17	73.1	1533	6.74	" " "( BAILER DRY )

Total Purged (gallons): 17.0 No. of Casing Volumes: 1.65

Well Sampling Method: 1.5" TEFLON BAILER

Decon. Method: 1 WASH / 3 RINSE

Sample Container	Sample Number
2 - 40 ML. VOA VIALS	MW - 3 - A
1 - 1,000 ML. HDPE	MW - 3 - B
1 - 250 ML. HDPE	MW - 3 - C
2 - 40 ML. VOA VIALS	EQUIPMENT BLANK

Observations/Notes/Calibration record:

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# WATER SAMPLE LOG

Project Name: MENADNECK Date: 8-22-95  
 Well No. MW-4 Location: ON-SITE Collected by: WESEL

Well Purging Method: 3.5" PVC BAILEER

Total Depth: 48.80 Height of Water Column: 16.82

Decon. Method: 1 WASH 13 RINSE

Casing volumes to be purged: 2" (0.16 gal./ft.) 4" (0.65 gal./ft.) 6" (1.47 gal./ft.)

$$3 \text{ casing vol.} \times 0.65 \text{ gal./ft.} \times 16.82 \text{ ft} = 32.79 \text{ gal.}$$

Time	WL. (ft.)	Purged (gallons)	Temp °F	mΩ	pH	Notes
1222	31.98	00				
1234		10	77.0	1367	6.82	H2O Gddy BROWN
1239		18	75.9	1442	6.86	" " "(BAILED) DRY
1242		20	75.4	1492	6.86	" " "(")
1248		24	75.3	1484	6.87	" " "(")

Total Purged (gallons): 24.0 No. of Casing Volumes: 2.19

Well Sampling Method: 1.5" TEFLON BAILEER

Decon. Method: 1 WASH 13 RINSE

Sample Container	Sample Number
<u>2-4 CM. VCA VIALS</u>	<u>MW-4-A</u>
<u>1 - 1,000 ML HDPE</u>	<u>MW-4-B</u>
<u>1 - 250 ML HDPE</u>	<u>MW-4-C</u>

Observations/Notes/Calibration record:

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# WATER SAMPLE LOG

Project Name: MORADNECK Date: 8-23-95  
 Well No. M.W.-7 Location: OFF - S. 72 Collected by: CC & B.J.

Well Purging Method: 3.5" PVC BAILER

Total Depth: 56.40 Height of Water Column: 25.47

Decon. Method: 1 WASH / 3 RINSE

Casing volumes to be purged: 2" (0.16 gal./ft.)    4" (0.65 gal./ft.)    6" (1.47 gal./ft.)

$$3 \text{ casing vol.} \times 0.16 \text{ gal./ft.} \times 25.47 \text{ ft} = 49.66 \text{ gal.}$$

Time	W.L. (ft.)	Purged (gallons)	Temp °F	mΩ	pH	Notes
0930	30.93	cc				
1000		10	75.3	1252	7.15	H <sub>2</sub> O Gray Brown
1003		20	75.2	1249	7.14	" " "
1006		30	75.1	1243	7.16	" " "
1010		40	74.7	1242	7.19	" " "
1012		45	74.2	1240	7.20	" " "
1015		50	74.0	1238	7.17	" " "

Total Purged (gallons): 50.0 No. of Casing Volumes: 3

Well Sampling Method: 1.5" TEFLON BAILER

Decon. Method: 1 WASH / 3 RINSE

Sample Container	Sample Number
2 - 40 ML. VCA VIALS	MW-7-A
1 - 1,000 ML. HDPE	MW-7-B
1 - 250 ML. HDPE	MW-7-C
2 - 40 ML. VCA VIALS	TRIP BLANK

Observations/Notes/Calibration record:

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# WATER SAMPLE LOG

Project Name: McJADECK Date: 8-23-95  
 Well No. MW-8 Location: ON-SITE Collected by: CC & BW

Well Purging Method: 3.5" PVC BAILER

Total Depth: 51.53 Height of Water Column: 20.80

Decon. Method: 1 WASH / 3 RINSE

Casing volumes to be purged: 2" (0.16 gal./ft.)    4" (0.65 gal./ft.)    6" (1.47 gal./ft.)

3 casing vol. x .65 gal./ft. x 20.80 ft = 40.56 gal.

Time	W.L. (ft.)	Purged (gallons)	Temp °F	mΩ	pH	Notes
1025	30.73	cc				
1043	20	73.2	1394	6.99	7.04	H2C - VERY CLOUDY
	25	73.4	1391	7.04	" "	" "
1046	30	73.5	1392	7.05	" "	" "
	35	73.5	1389	7.01	" "	" "
1050	41	73.5	1389	6.96	" "	" "

Total Purged (gallons): 410 No. of Casing Volumes: 3

Well Sampling Method: 1.5" TEFLON BAILER

Decon. Method: 1 WASH / 3 RINSE

Sample Container	Sample Number
2-40 ML. VCA VIALS	MW-8-A
1-1,000 ML. HDPE	MW-8-B
1-250 ML. HDPE	MW-8-C

Observations/Notes/Calibration record: WEATHER: 80°/CLEAR

# WATER SAMPLE LOG

Project Name: MICHIGAN CITY Date: 8-23-95  
 Well No. MW-11 Location: ON-SITE Collected by: R.W. : CC

Well Purging Method: 3.5" PVC BAILER  
 Total Depth: 96.60 Height of Water Column: 65.41  
 Decon. Method: 1 WASH / 3 RINSE  
 Casing volumes to be purged: 2" (0.16 gal./ft.)      4" (0.65 gal./ft.)      6" (1.47 gal./ft.)

$$3 \text{ casing vol.} \times .65 \text{ gal./ft.} \times 65.41 \text{ ft} = 127.54 \text{ gal.}$$

Time	W.L. (ft.)	Purged (gallons)	Temp °F	mΩ	pH	Notes
1100	31.19	00				
1124		50	77.7	1242	7.11	H <sub>2</sub> O C-0005?
1146		100	79.1	1246	7.20	" "
		105	77.2	1225	7.11	" "
1149		110	74.6	1215	7.09	" "
		115	74.3	1208	7.11	" "
1152		120	73.7	1201	7.15	" "
		125	73.5	1208	7.17	" "
1157		129	74.4	1210	7.12	" "

Total Purged (gallons): 129.0      No. of Casing Volumes: 3  
 Well Sampling Method: 1.5" TEFLON BAILER  
 Decon. Method: 1 WASH / 3 RINSE

Sample Container	Sample Number
<u>2 - 40 ML. VCA VIALS</u>	<u>MW-11-A</u>
<u>1 - 1000 ML. HDPE</u>	<u>MW-11-B</u>
<u>1 - 250 ML. HDPE</u>	<u>MW-11-C</u>

Observations/Notes/Calibration record: WEATHER: 85°/CLEAR

# WATER SAMPLE LOG

Project Name: MONADNOCK Date: 8-22-95  
Well No. PRESTO WELL Location: CFF - S. TE Collected by: WESSEL  
Mw-12

Well Purging Method: 3.5" PVC BAILER

Total Depth: 49.48 Height of Water Column: 18.98

Decon. Method: 1 WASH 1 3 RINSE

Casing volumes to be purged: 2" (0.16 gal./ft.) 4" (0.65 gal./ft.) 6" (1.47 gal./ft.)

$$3 \text{ casing vol.} \times .65 \text{ gal./ft.} \times 18.98 \text{ ft} = 37.01 \text{ gal.}$$

Time	W.L. (ft.)	Purged (gallons)	Temp °F	mΩ	pH	Notes
1025	30.50	00				
1049		10	77.1	1635	7.16	H <sub>2</sub> O Cloudy Brown
1056	20	76.1	1652	7.18	"	"
1059	25	75.2	1654	7.16	"	"
1103	30	75.2	1660	7.12	"	"
1107	35	75.4	1687	7.11	"	"
1110	38	75.2	1684	7.10	"	"

Total Purged (gallons): 38.0 No. of Casing Volumes: 3

Well Sampling Method: 1.5" TEFFLON BAILER

Decon. Method: 1 WASH 1 3 RINSE

Sample Container	Sample Number
2 - 40 ML. VCA V.ALS	PRESTO WELL - A
1 - 1,000 ML. HOPE	PRESTO WELL - B
1 - 250 ML. HOPE	PRESTO WELL - C

Observations/Notes/Calibration record: • pH METER ZERED @ 7.0, SPANNED TO 10.0.

- PACKING AROUND WELL CASING HAS COLLAPSED APPROX. 9", ON EAST SIDE,
- WELL SOUNDED @ 1125, AFTER PURGING. H<sub>2</sub>O LEVEL 34.08.

**APPENDIX B**

**CHAIN-OF-CUSTODY FORMS**

**AND**

**ANALYTICAL LABORATORY REPORTS**

**CKY****C K Y incorporated  
Analytical Laboratories**

Date: 09-06-1995  
CKY Batch No.: 95H123

Attn.: Debbie Takashima R2-1112

TRW  
One Space Park Drive  
Redondo Beach, CA 90278

Subject: Laboratory Report  
Project: Monadnock

-----  
Enclosed is the Laboratory report for samples received on 08/23/95. The samples were received in coolers with ice and intact; the chain-of-custody forms were properly filled out. The data reported include :

Sample ID	Control No.	Matrix	Analysis
PRESTO-WELL-A	H123-01	Water	EPA 601
PRESTO-WELL-B	H123-02	Water	Cyanide
PRESTO-WELL-C	H123-03	Water	Chromium
			Cadmium
MW-1-A	H123-04	Water	EPA 601
MW-1-B	H123-05	Water	Cyanide
MW-1-C	H123-06	Water	Chromium
			Cadmium
MW-4-A	H123-07	Water	EPA 601
MW-4-B	H123-08	Water	Cyanide
MW-4-C	H123-09	Water	Chromium
			Cadmium
MW-3-A	H123-10	Water	EPA 601
MW-3-B	H123-11	Water	Cyanide
MW-3-C	H123-12	Water	Chromium
			Cadmium
TRIPBLANK	H123-13	Water	EPA 601
EQUIPMENTBLANK	H123-14	Water	EPA 601
MW-8-A	H123-15	Water	EPA 601
MW-8-B	H123-16	Water	Cyanide
MW-8-C	H123-17	Water	Chromium
			Cadmium
MW-11-A	H123-18	Water	EPA 601
MW-11-B	H123-19	Water	Cyanide

Sample ID	Control No.	Matrix	Analysis
MW-11-C	H123-20	Water	Chromium Cadmium
MW-7-A	H123-21	Water	EPA 601
MW-7-B	H123-22	Water	Cyanide
MW-7-C	H123-23	Water	Chromium Cadmium
MW-2-A	H123-24	Water	EPA 601
MW-2-B	H123-25	Water	Cyanide
MW-2-C	H123-26	Water	Chromium Cadmium

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

*Kam Pang*

Kam Y. Pang, Ph.D.  
Laboratory Director

P.S. - All analyses requested for the above referenced project have been completed. Therefore, unless instructed, the remaining portions of the samples will be disposed after fifteen (15) days from the date of this report.

EPA METHOD 8010  
HALOGENATED VOLATILE ORGANICS

CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	NA
SAMPLE ID:	MW-1-A	DATE ANALYZED:	09/02/95
CONTROL NO.:	H123-04	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	1.5	1
Methylene Chloride	ND	5
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
Chloroform	ND	1
1,1,1-Trichloroethane	ND	1
Carbon Tetrachloride	ND	1
1,2-Dichloroethane	ND	1
Trichloroethene	ND	1
1,2-Dichloropropane	ND	1
Dibromomethane	ND	1
Bromodichloromethane	ND	1
2-Chloroethyl vinyl ether	ND	1
trans-1,3-Dichloropropene	ND	1
cis-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane	ND	1
Tetrachloroethene	ND	1
1,3-Dichloropropane	ND	1
1,1,1,2-Tetrachloroethane	ND	1
Dibromochloromethane	ND	1
Ethylene Dibromide	ND	1
Chlorobenzene	ND	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorotoluene	1.5	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
Benzylchloride	ND	1
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	100	65-135

MDL: Method Detection Limit



CKY INC., ANALYTICAL LABORATORIES, 630 Maple Ave., Torrance, Calif. 90503 Tel. (310) 618-8889 Fax: (310) 618-0818

EPA METHOD 8010  
HALOGENATED VOLATILE ORGANICS

CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	NA
SAMPLE ID:	MW-2-A	DATE ANALYZED:	09/05/95
CONTROL NO.:	H123-24	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	82	1
Methylene Chloride	ND	5
cis-1,2-Dichloroethene	1.2	1
trans-1,2-Dichloroethene	ND	1
1,1-Dichloroethane	5.8	1
Chloroform	2.1	1
1,1,1-Trichloroethane	ND	1
Carbon Tetrachloride	ND	1
1,2-Dichloroethane	2.0	1
Trichloroethene	170	1
1,2-Dichloropropane	ND	1
Dibromomethane	ND	1
Bromodichloromethane	ND	1
2-Chloroethyl vinylether	ND	1
trans-1,3-Dichloropropene	ND	1
cis-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane	ND	1
Tetrachloroethene	12	1
1,3-Dichloropropane	74	1
1,1,1,2-Tetrachloroethane	ND	1
Dibromochloromethane	ND	1
Ethylene Dibromide	ND	1
Chlorobenzene	ND	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorotoluene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
Benzylchloride	ND	1
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	99	65-135

MDL: Method Detection Limit



CKY INC., ANALYTICAL LABORATORIES, 630 Maple Ave., Torrance, Calif. 90503 Tel. (310) 618-8889 Fax: (310) 618-0818

EPA METHOD 8010  
HALOGENATED VOLATILE ORGANICS

CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	NA
SAMPLE ID:	MW-3-A	DATE ANALYZED:	09/03/95
CONTROL NO.:	H123-10	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	results (ug/L)	MDL (ug/L)
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	1.4	1
Methylene Chloride	ND	5
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
Chloroform	ND	1
1,1,1-Trichloroethane	ND	1
Carbon Tetrachloride	ND	1
1,2-Dichloroethane	ND	1
Trichloroethene	ND	1
1,2-Dichloropropane	ND	1
Dibromomethane	ND	1
Bromodichloromethane	ND	1
2-Chloroethyl vinyl ether	ND	1
trans-1,3-Dichloropropene	ND	1
cis-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane	ND	1
Tetrachloroethene	ND	1
1,3-Dichloropropane	ND	1
1,1,1,2-Tetrachloroethane	ND	1
Dibromochloromethane	ND	1
Ethylene Dibromide	ND	1
Chlorobenzene	ND	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorotoluene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
Benzylchloride	ND	1
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	94	65-135

MDL: Method Detection Limit

EPA METHOD 8010  
HALOGENATED VOLATILE ORGANICS

CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	NA
SAMPLE ID:	MW-4-A	DATE ANALYZED:	09/03/95
CONTROL NO.:	H123-07	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	results (ug/L)	MDL (ug/L)
Dichlorodifluoromethane	10	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	1.1	1
Methylene Chloride	ND	5
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
Chloroform	ND	1
1,1,1-Trichloroethane	ND	1
Carbon Tetrachloride	ND	1
1,2-Dichloroethane	ND	1
Trichloroethene	ND	1
1,2-Dichloropropane	ND	1
Dibromomethane	ND	1
Bromodichloromethane	ND	1
2-Chloroethyl vinyl ether	ND	1
trans-1,3-Dichloropropene	ND	1
cis-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane	ND	1
Tetrachloroethene	ND	1
1,3-Dichloropropane	1.0	1
1,1,1,2-Tetrachloroethane	ND	1
Dibromochloromethane	ND	1
Ethylene Dibromide	ND	1
Chlorobenzene	ND	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorotoluene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
Benzylchloride	ND	1
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	97	65-135

MDL: Method Detection Limit

EPA METHOD 8010  
HALOGENATED VOLATILE ORGANICS

CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	NA
SAMPLE ID:	MW-7-A	DATE ANALYZED:	09/05/95
CONTROL NO.:	H123-21	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	results (ug/L)	MDL (ug/L)
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorodifluoromethane	ND	1
1,1-Dichloroethene	43	1
Methylene Chloride	ND	5
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
Chloroform	ND	1
1,1,1-Trichloroethane	ND	1
Carbon Tetrachloride	ND	1
1,2-Dichloroethane	ND	1
Trichloroethene	130	1
1,2-Dichloropropane	ND	1
Dibromomethane	1.2	1
Bromodichloromethane	ND	1
2-Chloroethyl vinyl ether	ND	1
trans-1,3-Dichloropropene	ND	1
cis-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane	ND	1
Tetrachloroethene	1.9	1
1,3-Dichloropropane	23	1
1,1,1,2-Tetrachloroethane	ND	1
Dibromochloromethane	ND	1
Ethylene Dibromide	ND	1
Chlorobenzene	ND	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorotoluene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
Benzylchloride	ND	1
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	98	65-135

MDL: Method Detection Limit



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EPA METHOD 8010  
HALOGENATED VOLATILE ORGANICS

CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	NA
SAMPLE ID:	MW-8-A	DATE ANALYZED:	09/05/95
CONTROL NO.:	H123-15	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	results (ug/L)	MDL (ug/L)
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	7.9	1
Methylene Chloride	ND	5
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
Chloroform	ND	1
1,1,1-Trichloroethane	ND	1
Carbon Tetrachloride	ND	1
1,2-Dichloroethane	ND	1
Trichloroethene	19	1
1,2-Dichloropropane	ND	1
Dibromomethane	ND	1
Bromodichloromethane	ND	1
2-Chloroethyl vinyl ether	ND	1
trans-1,3-Dichloropropene	ND	1
cis-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane	ND	1
Tetrachloroethene	ND	1
1,3-Dichloropropane	5.9	1
1,1,1,2-Tetrachloroethane	ND	1
Dibromochloromethane	ND	1
Ethylene Dibromide	ND	1
Chlorobenzene	ND	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorotoluene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
Benzylchloride	ND	1
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	98	65-135

MDL: Method Detection Limit

EPA METHOD 8010  
HALOGENATED VOLATILE ORGANICS

CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	NA
SAMPLE ID:	MW-11-A	DATE ANALYZED:	09/05/95
CONTROL NO.:	H123-18	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	results (ug/L)	MDL (ug/L)
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	12	1
Methylene Chloride	ND	5
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
Chloroform	ND	1
1,1,1-Trichloroethane	ND	1
Carbon Tetrachloride	ND	1
1,2-Dichloroethane	ND	1
Trichloroethene	43	1
1,2-Dichloropropane	ND	1
Dibromomethane	ND	1
Bromodichloromethane	ND	1
2-Chloroethyl vinyl ether	ND	1
trans-1,3-Dichloropropene	ND	1
cis-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane	ND	1
Tetrachloroethene	ND	1
1,3-Dichloropropane	5.3	1
1,1,1,2-Tetrachloroethane	ND	1
Dibromochloromethane	ND	1
Ethylene Dibromide	ND	1
Chlorobenzene	ND	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorotoluene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
Benzylchloride	ND	1
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	109	65-135

MDL: Method Detection Limit

EPA METHOD 8010  
HALOGENATED VOLATILE ORGANICS

CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	NA
SAMPLE ID:	PRESTO-WELL-A	DATE ANALYZED:	09/05/95
CONTROL NO.:	H123-01	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	results (ug/L)	MDL (ug/L)
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorodifluoromethane	ND	1
1,1-Dichloroethene	250+	10
Methylene Chloride	18	5
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
1,1-Dichloroethane	6.7	1
Chloroform	4.1	1
1,1,1-Trichloroethane	ND	1
Carbon Tetrachloride	ND	1
1,2-Dichloroethane	7.0	1
Trichloroethene	540+	10
1,2-Dichloropropane	ND	1
Dibromomethane	ND	1
Bromodichloromethane	1.7	1
2-Chloroethyl vinyl ether	4.6	1
trans-1,3-Dichloropropene	ND	1
cis-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane	ND	1
Tetrachloroethene	13	1
1,3-Dichloropropane	62	1
1,1,1,2-Tetrachloroethane	ND	1
Dibromochloromethane	ND	1
Ethylene Dibromide	ND	1
Chlorobenzene	1.8	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorotoluene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
Benzylchloride	ND	1
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	103	65-135

MDL: Method Detection Limit  
+ : Dilution factor is 10

EPA METHOD 8010  
HALOGENATED VOLATILE ORGANICS

CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	NA
SAMPLE ID:	EQUIPMENTBLANK	DATE ANALYZED:	09/03/95
CONTROL NO.:	H123-14	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	results (ug/L)	MDL (ug/L)
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorofluoromethane	ND	1
1,1-Dichloroethene	1.1	1
Methylene Chloride	ND	5
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
Chloroform	6.8	1
1,1,1-Trichloroethane	ND	1
Carbon Tetrachloride	ND	1
1,2-Dichloroethane	ND	1
Trichloroethene	ND	1
1,2-Dichloropropane	ND	1
Dibromomethane	ND	1
Bromodichloromethane	1.8	1
2-Chloroethyl vinyl ether	ND	1
trans-1,3-Dichloropropene	ND	1
cis-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane	ND	1
Tetrachloroethene	ND	1
1,3-Dichloropropane	ND	1
1,1,1,2-Tetrachloroethane	ND	1
Dibromochloromethane	ND	1
Ethylene Dibromide	ND	1
Chlorobenzene	ND	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorotoluene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
Benzylchloride	ND	1
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	94	65-135

MDL: Method Detection Limit



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EPA METHOD 8010  
HALOGENATED VOLATILE ORGANICS

CLIENT:	TRW	DATE COLLECTED:	NA
PROJECT:	Monadnock	DATE RECEIVED:	NA
BATCH NO.:	95H123	DATE EXTRACTED:	NA
SAMPLE ID:	MBLK2W	DATE ANALYZED:	09/04/95
CONTROL NO.:	VAI037B	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	results (ug/L)	MDL (ug/L)
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorodifluoromethane	ND	1
1,1-Dichloroethene	ND	1
Methylene Chloride	ND	5
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
Chloroform	ND	1
1,1,1-Trichloroethane	ND	1
Carbon Tetrachloride	ND	1
1,2-Dichloroethane	ND	1
Trichloroethene	ND	1
1,2-Dichloropropane	ND	1
Dibromomethane	ND	1
Bromodichloromethane	ND	1
2-Chloroethyl vinyl ether	ND	1
trans-1,3-Dichloropropene	ND	1
cis-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane	ND	1
Tetrachloroethene	ND	1
1,3-Dichloropropane	ND	1
1,1,1,2-Tetrachloroethane	ND	1
Dibromochloromethane	ND	1
Ethylene Dibromide	ND	1
Chlorobenzene	ND	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorotoluene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
Benzylchloride	ND	1
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	96	65-135

MDL: Method Detection Limit



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EPA METHOD 8010  
HALOGENATED VOLATILE ORGANICS

CLIENT:	TRW	DATE COLLECTED:	NA
PROJECT:	Monadnock	DATE RECEIVED:	NA
BATCH NO.:	95H123	DATE EXTRACTED:	NA
SAMPLE ID:	MBLK1W	DATE ANALYZED:	09/02/95
CONTROL NO.:	VAI027B	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	results (ug/L)	MDL (ug/L)
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorodifluoromethane	ND	1
1,1-Dichloroethene	ND	1
Methylene Chloride	ND	5
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
Chloroform	ND	1
1,1,1-Trichloroethane	ND	1
Carbon Tetrachloride	ND	1
1,2-Dichloroethane	ND	1
Trichloroethene	ND	1
1,2-Dichloropropane	ND	1
Dibromomethane	ND	1
Bromodichloromethane	ND	1
2-Chloroethyl vinyl ether	ND	1
trans-1,3-Dichloropropene	ND	1
cis-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane	ND	1
Tetrachloroethene	ND	1
1,3-Dichloropropane	ND	1
1,1,1,2-Tetrachloroethane	ND	1
Dibromochloromethane	ND	1
Ethylene Dibromide	ND	1
Chlorobenzene	ND	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorotoluene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
Benzylchloride	ND	1
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	101	65-135

MDL: Method Detection Limit



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EPA METHOD 8010  
HALOGENATED VOLATILE ORGANICS

CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	NA
SAMPLE ID:	TRIPBLANK	DATE ANALYZED:	09/03/95
CONTROL NO.:	H123-13	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	results (ug/L)	MDL (ug/L)
Dichlorodifluoromethane	ND	5
Chloromethane	ND	5
Vinyl Chloride	ND	5
Bromomethane	ND	5
Chloroethane	ND	5
Trichlorodifluoromethane	ND	1
1,1-Dichloroethene	1.4	1
Methylene Chloride	ND	5
cis-1,2-Dichloroethene	ND	1
trans-1,2-Dichloroethene	ND	1
1,1-Dichloroethane	ND	1
Chloroform	7.3	1
1,1,1-Trichloroethane	ND	1
Carbon Tetrachloride	ND	1
1,2-Dichloroethane	ND	1
Trichloroethene	ND	1
1,2-Dichloropropane	ND	1
Dibromomethane	ND	1
Bromodichloromethane	2.1	1
2-Chloroethyl vinylether	ND	1
trans-1,3-Dichloropropene	ND	1
cis-1,3-Dichloropropene	ND	1
1,1,2-Trichloroethane	ND	1
Tetrachloroethene	ND	1
1,3-Dichloropropane	ND	1
1,1,1,2-Tetrachloroethane	ND	1
Dibromochloromethane	ND	1
Ethylene Dibromide	ND	1
Chlorobenzene	ND	1
Bromoform	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Chlorotoluene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1
Benzylchloride	ND	1
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	96	65-135

MDL: Method Detection Limit



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EPA METHOD 335.2  
TOTAL CYANIDE

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CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	08/29/95
MATRIX:	WATER	DATE ANALYZED:	08/30/95

=====

SAMPLE ID	CONTROL NO	RESULT (mg/L)	DILUTION FACTOR	MDL (mg/L)
PRESTO-WELL-B	H123-02	.502	10	.1
MW-1-B	H123-05	ND	10	.1
MW-4-B	H123-08	ND	10	.1
MW-3-B	H123-11	ND	10	.1
MW-8-B	H123-16	ND	10	.1
MW-11-B	H123-19	ND	10	.1
MW-7-B	H123-22	.025	10	.1
MW-2-B	H123-25	1.82	20	.2
MBLK1W	CNH015WB	ND	1	.01

MDL: Method Detection Limit



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EPA METHOD 3005/6010  
METALS BY ICP

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CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	08/24/95
SAMPLE ID:	MW-1-C	DATE ANALYZED:	08/25/95
CONTROL NO.:	H123-06	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

=====

PARAMETER	DET LIMIT (ug/L)	RESULT (ug/L)
Cadmium	5	ND
Chromium	10	ND



EPA METHOD 3005/6010  
METALS BY ICP

=====

CLIENT: TRW DATE COLLECTED: 08/23/95  
PROJECT: Monadnock DATE RECEIVED: 08/23/95  
BATCH NO.: 95H123 DATE EXTRACTED: 08/24/95  
SAMPLE ID: MW-2-C DATE ANALYZED: 08/25/95  
CONTROL NO.: H123-26 MATRIX: WATER  
% MOISTURE: NA DILUTION FACTOR: 1

=====

PARAMETER	DET LIMIT (ug/L)	RESULT (ug/L)
Cadmium	5	ND
Chromium	10	164



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EPA METHOD 3005/6010  
METALS BY ICP

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CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	08/24/95
SAMPLE ID:	MW-3-C	DATE ANALYZED:	08/25/95
CONTROL NO.:	H123-12	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

=====

PARAMETER	DET LIMIT (ug/L)	RESULT (ug/L)
Cadmium	5	ND
Chromium	10	ND



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EPA METHOD 3005/6010  
METALS BY ICP

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CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	08/24/95
SAMPLE ID:	MW-4-C	DATE ANALYZED:	08/25/95
CONTROL NO.:	H123-09	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

=====

PARAMETER	DET LIMIT (ug/L)	RESULT (ug/L)
Cadmium	5	ND
Chromium	10	ND



EPA METHOD 3005/6010  
METALS BY ICP

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CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	08/24/95
SAMPLE ID:	MW-7-C	DATE ANALYZED:	08/25/95
CONTROL NO.:	H123-23	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

=====

PARAMETER	DET LIMIT (ug/L)	RESULT (ug/L)
Cadmium	5	ND
Chromium	10	26.5



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EPA METHOD 3005/6010  
METALS BY ICP

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CLIENT:	TRW	DATE COLLECTED:	08/23/95
PROJECT:	Monadnock	DATE RECEIVED:	08/23/95
BATCH NO.:	95H123	DATE EXTRACTED:	08/24/95
SAMPLE ID:	MW-8-C	DATE ANALYZED:	08/25/95
CONTROL NO.:	H123-17	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

=====

PARAMETER	DET LIMIT (ug/L)	RESULT (ug/L)
Cadmium	5	ND
Chromium	10	14.4



EPA METHOD 3005/6010  
METALS BY ICP

=====

CLIENT: TRW DATE COLLECTED: 08/23/95  
PROJECT: Monadnock DATE RECEIVED: 08/23/95  
BATCH NO.: 95H123 DATE EXTRACTED: 08/24/95  
SAMPLE ID: MW-11-C DATE ANALYZED: 08/25/95  
CONTROL NO.: H123-20 MATRIX: WATER  
% MOISTURE: NA DILUTION FACTOR: 1

=====

PARAMETER	DET LIMIT (ug/L)	RESULT (ug/L)
Cadmium	5	ND
Chromium	10	13.3



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EPA METHOD 3005/6010  
METALS BY ICP

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CLIENT: TRW DATE COLLECTED: 08/23/95  
PROJECT: Monadnock DATE RECEIVED: 08/23/95  
BATCH NO.: 95H123 DATE EXTRACTED: 08/24/95  
SAMPLE ID: PRESTO-WELL-C /M11-3/ DATE ANALYZED: 08/25/95  
CONTROL NO.: H123-03 MATRIX: WATER  
% MOISTURE: NA DILUTION FACTOR: 1

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PARAMETER	DET LIMIT (ug/L)	RESULT (ug/L)
Cadmium	5	ND
Chromium	10	25.6



EPA METHOD 3005/6010  
METALS BY ICP

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CLIENT: TRW DATE COLLECTED: NA  
PROJECT: Monadnock DATE RECEIVED: NA  
BATCH NO.: 95H123 DATE EXTRACTED: 08/24/95  
SAMPLE ID: MBLK1W DATE ANALYZED: 08/25/95  
CONTROL NO.: IPH042WB MATRIX: WATER  
% MOISTURE: NA DILUTION FACTOR: 1  
=====

PARAMETER	DET LIMIT (ug/L)	RESULT (ug/L)
Cadmium	5	ND
Chromium	10	ND



CKY INC., ANALYTICAL LABORATORIES, 630 Maple Ave., Torrance, Calif. 90503 Tel. (310) 618-8889 Fax: (310) 618-0818

CKY QUALITY CONTROL DATA  
SPIKE/SPIKE DUPLICATE ANALYSIS

CLIENT: TRW  
PROJECT: Monadnock  
METHOD: EPA 8010  
MATRIX: WATER

BATCH NO.: 95H123 DATE RECEIVED: 08/23/95  
SAMPLE ID: MW-1-A DATE EXTRACTED: NA  
CONTROL NO.: H123-04 DATE ANALYZED: 09/05/95

ACCESSION: 95H102 95H123

Parameter	SAMPLE CONC (ug/L)	SPIKE ADDED (ug/L)	MS CONC (ug/L)	% REC	SPIKE ADDED (ug/L)	MSD CONC (ug/L)	% REC	% RPD
1,1-DCE	1.50	20.00	25.30	119	20.00	25.10	118	1
TCE	ND	20.00	23.70	119	20.00	24.20	121	2
Chlorobenzene	ND	20.00	22.50	113	20.00	23.20	116	3

QC LIMIT: 65-135 65-135 30



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CKY QUALITY CONTROL DATA  
LABORATORY CONTROL SAMPLE ANALYSIS

CLIENT: TRW  
PROJECT: Monadnock  
METHOD: EPA 8010  
MATRIX: WATER

BATCH NO.: 95H123 DATE RECEIVED: NA  
SAMPLE ID: LCS1W/LCS1WD DATE EXTRACTED: NA  
CONTROL NO.: VAI027L/C DATE ANALYZED: 09/02/95

ACCESSION: 95H123

Parameter	SAMPLE CONC (ug/L)	SPIKE ADDED (ug/L)	LCS CONC (ug/L)	% LCS REC	SPIKE ADDED (ug/L)	LCSD CONC (ug/L)	% LCSD REC	% RPD
1,1-DCE	ND	20.00	20.10	101	20.00	21.20	106	5
TCE	ND	20.00	22.40	112	20.00	23.40	117	4
Chlorobenzene	ND	20.00	22.20	111	20.00	21.70	109	2

QC LIMIT: 70-125 70-125 30



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CKY QUALITY CONTROL DATA  
LABORATORY CONTROL SAMPLE ANALYSIS

CLIENT: TRW  
PROJECT: Monadnock  
METHOD: EPA 8010  
MATRIX: WATER

BATCH NO.: 95H123 DATE RECEIVED: NA  
SAMPLE ID: LCS2W/LCS2WD DATE EXTRACTED: NA  
CONTROL NO.: VAI037L/C DATE ANALYZED: 09/04/95

ACCESSION: 95H102 95H123

Parameter	SAMPLE CONC (ug/L)	SPIKE ADDED (ug/L)	LCS CONC (ug/L)	LCS % REC	SPIKE ADDED (ug/L)	LCSD CONC (ug/L)	LCSD % REC	% RPD
1,1-DCE	ND	20.00	22.70	113	20.00	23.90	119	5
TCE	ND	20.00	23.10	115	20.00	24.50	123	6
Chlorobenzene	ND	20.00	19.10	96	20.00	21.50	107	12

QC LIMIT: 70-125 70-125 30



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CKY QUALITY CONTROL DATA  
DUPLICATE SAMPLE ANALYSIS

CLIENT: TRW  
PROJECT: Monadnock  
METHOD: EPA 335.2  
MATRIX: WATER

BATCH NO.: 95H123 DATE RECEIVED: 08/23/95  
SAMPLE ID: MW-4-B DATE EXTRACTED: 08/29/95  
CONTROL NO.: H123-08 DATE ANALYZED: 08/30/95

ACCESSION: 95H122 95H123

PARAMETER	SAMPLE (mg/L)	DUP. SAMPLE (mg/L)	RPD (%)
Cyanide	ND	ND	0
QC LIMIT:			20



CKY QUALITY CONTROL DATA  
LABORATORY CONTROL SAMPLE ANALYSIS

CLIENT: TRW  
PROJECT: Monadnock  
METHOD: EPA 335.2  
MATRIX: WATER

BATCH NO.: 95H123 DATE RECEIVED: NA  
SAMPLE ID: LCS1W/LCS1WD DATE EXTRACTED: 08/29/95  
CONTROL NO.: CNH015WL/C DATE ANALYZED: 08/30/95

ACCESSION: 95H122 95H123

PARAMETER	SAMPLE CONC (mg/L)	SPIKE ADDED (mg/L)	LCS CONC (mg/L)	% LCS REC	SPIKE ADDED (mg/L)	LCSD CONC (mg/L)	% LCSD REC	% RPD
Cyanide	ND	0.45	0.40	89	0.45	0.41	92	3
QC LIMIT:				85-115			85-115	20



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CKY QUALITY CONTROL DATA  
SPIKE ANALYSIS

CLIENT: TRW  
PROJECT: Monadnock  
METHOD: EPA 3005/6010  
MATRIX: WATER

=====

BATCH NO.: 95H123 DATE RECEIVED: NA  
SAMPLE ID: PTX06-1019-1276 DATE EXTRACTED: 08/24/95  
CONTROL NO.: H129-01 DATE ANALYZED: 08/25/95

ACCESSION: 95H123 95H128 95H129 95H132

PARAMETER	SAMPLE RESULT (ug/L)	SPIKE CONC. (ug/L)	SPIKE RESULT (ug/L)	SPIKE RECRY. (%)
Cadmium	5.3	1000	1120	111
Chromium	37.4	1000	1060	102

QC LIMIT: 75-125



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CKY QUALITY CONTROL DATA  
SPIKE/SPIKE DUPLICATE ANALYSIS

CLIENT: TRW  
PROJECT: Monadnock  
METHOD: EPA 3005/6010  
MATRIX: WATER

BATCH NO.: 95H123 DATE RECEIVED: NA  
SAMPLE ID: ER-016 DATE EXTRACTED: 08/24/95  
CONTROL NO.: H128-03 DATE ANALYZED: 08/25/95

ACCESSION: 95H123 95H128 95H129 95H132

PARAMETER	SAMPLE CONC (ug/L)	SPIKE ADDED (ug/L)	MS CONC (ug/L)	% MS REC	SPIKE ADDED (ug/L)	MSD CONC (ug/L)	% MSD REC	% RPD
Cadmium	ND	1000	948	95	1000	984	98	4
Chromium	ND	1000	968	97	1000	1003	100	4

QC LIMIT: 75-125 75-125 20



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CKY QUALITY CONTROL DATA  
DUPLICATE SAMPLE ANALYSIS

CLIENT: TRW  
PROJECT: Monadnock  
METHOD: EPA 3005/6010  
MATRIX: WATER

BATCH NO.: 95H123 DATE RECEIVED: NA  
SAMPLE ID: PTX06-1019-1276 DATE EXTRACTED: 08/24/95  
CONTROL NO.: H129-01 DATE ANALYZED: 08/25/95

ACCESSION: 95H123 95H128 95H129 95H132

PARAMETER	SAMPLE RESULT ( $\mu$ g/L)	DUP SAMPLE RESULT ( $\mu$ g/L)	RPD RESULT (%)
Cadmium	5.3	6.13	15
Chromium	37.4	33.4	11
QC LIMIT:			20



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CKY QUALITY CONTROL DATA  
LABORATORY CONTROL SAMPLE ANALYSIS

CLIENT: TRW  
PROJECT: Monadnock  
METHOD: EPA 3005/6010  
MATRIX: WATER

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BATCH NO.: 95H123 DATE RECEIVED: NA  
SAMPLE ID: LCS1W/LCS1WD DATE EXTRACTED: 08/24/95  
CONTROL NO.: IPH042WL/C DATE ANALYZED: 08/25/95

ACCESSION: 95H123 95H128 95H129 95H132

PARAMETER	SAMPLE CONC (ug/L)	SPIKE ADDED (ug/L)	LCS CONC (ug/L)	% LCS REC	SPIKE ADDED (ug/L)	LCSD CONC (ug/L)	% LCSD REC	% RPD
Cadmium	ND	1000	946	95	1000	947	95	0
Chromium	ND	1000	965	97	1000	961	96	0

QC LIMIT: 75-125 75-125 20



CKY INC., ANALYTICAL LABORATORIES, 630 Maple Ave., Torrance, Calif. 90503 Tel. (310) 618-8889 Fax: (310) 618-0818

951123

M3/WA1

CLIENT NAME: TRW  
 ADDRESS: ONE SPACE PARK  
 REDONDO BEACH, CA.  
 PHONE NO. 813-2722 FAX NO.  
 PROJECT NAME: MONADNOCK  
 SEND REPORT TO: DEBBIE TAKASHIMA

# CHAIN OF CUSTODY RECORD REQUEST FOR ANALYSIS

 DATE: 8-23-95  
 PAGE 2 OF 2


CKY Incorporated  
 Analytical Laboratories  
 630 Maple Ave.  
 Torrance, Calif. 90503  
 Tel: 310-618-8889  
 Fax: 310-618-0818

SAMPLE NUMBER	SAMPLING DATE/TIME	PRESERVATIVE	CONTAINER SIZE/TYPE	TURN AROUND TIME			ANALYSES REQUIRED								
				NORMAL <input checked="" type="checkbox"/>											
				RUSH <input type="checkbox"/>			418.1	M8015	8010/601	8020/602	8080/608	8240/624	8270/625	CAM Metals	CYANIDE
15 MW-8-A	8-23-95	HCL	2-40ML VIALS	X					X						
16 MW-8-B		NAOH	1-1,000ML HDPE											X	
17 MW-8-C		HNO3	1-250ML HDPE											X	
18 MW-11-A		HCL	2-40ML VIALS						X						
19 MW-11-B		NAOH	1-1,000ML HDPE										X		
20 MW-11-C		HNO3	1-250ML HDPE										X		
21 MW-7-A		HCL	2-40ML VIALS					X							
22 MW-7-B		NAOH	1-1,000ML HDPE										X		
23 MW-7-C		HNO3	1-250ML HDPE										X		
24 MW-2-A		HCL	2-40ML VIALS					X							
25 MW-2-B		NAOH	1-1,000ML HDPE										X		
26 MW-2-C	↓	HNO3	1-250ML HDPE	↓										X	

COMMENTS: IF ANY QUESTIONS: CONTACT DEBBIE TAKASHIMA.

T=ICED

Relinquished by: (Signature) <i>Bart Wessel</i>	Date: 8-23-95	Received by: (Signature) <i>S. Gable</i>	Date: 8-23-95	Relinquished by: (Signature)	Date:	Received by: (Signature)	Date:
Company: TRW	Time: 3:55	Company: CKY	Time: 3:55	Company:	Time:	Company:	Time:

Storage/Disposal of Samples: Sample will be stored at CKY for 30 days at no charge and at \$10/sample/month thereafter. Disposal of sample by the Laboratory will be charged at \$10/sample.

95 H123

M3/WAI

CLIENT  
NAME: TRW  
ADDRESS: ONE SPACE PARK  
REDONDO BCH., CA  
PHONE NO. 813-2722 FAX NO.  
PROJECT NAME: MONADNOCK  
SEND REPORT TO: DEBBIE TAKASHIMA

# CHAIN OF CUSTODY RECORD

## REQUEST FOR ANALYSIS

DATE: 8-23-95

PAGE 1 OF 2

CKY incorporated  
Analytical Laboratories  
630 Maple Ave.  
Torrance, Calif. 90503  
Tel: 310-618-8889  
Fax: 310-618-0818



SAMPLER NAME/SIGNATURE	TURN AROUND TIME			ANALYSES REQUIRED									
	NORMAL <input checked="" type="checkbox"/>												
	RUSH <input type="checkbox"/>			418.1	M8015	8010/601	8020/602	8080/608	8240/624	8270/625	CAM Metals	CYANIDE	TOTAL LEAD
BART WESSEL <i>(Bart Wessel)</i>	SAMPLE NUMBER	SAMPLING DATE/TIME	PRESERVATIVE	CONTAINER SIZE/TYPE	SAMPLE DESCRIPTION								
1 PRESTO WELL-A		8-23-95	HCL	2-40 ML. VOA VIALS	X			X					
2 PRESTO WELL-B			NAOH	1-1,000 ML. HDPE							X		
3 PRESTO WELL-C			HNO3	1-250 ML. HDPE							X		
4 MW-1-A			HCL	2-40 ML. VOA VIALS				X					
5 MW-1-B			NAOH	1-1,000 ML. HDPE							X		
6 MW-1-C			HNO3	1-250 ML. HDPE							X		
7 MW-4-A			HCL	2-40 ML. VOA VIALS			X						
8 MW-4-B			NAOH	1-1,000 ML. HDPE							X		
9 MW-4-C			HNO3	1-250 ML. HDPE							X		
10 MW-3-A			HCL	2-40 ML. VOA VIALS			X						
11 MW-3-B			NAOH	1-1,000 ML. HDPE							X		
12 MW-3-C			HNO3	1-250 ML. HDPE							X		
13 TRIP BLANK			HCL	2-40 ML. VOA VIALS			X						
14 EQUIPMENT BLANK	↓		HCL	2-40 ML. VOA VIALS	↓			X					

COMMENTS: IF ANY QUESTIONS: CONTACT DEBBIE TAKASHIMA.

T=ILED

Relinquished by: (Signature) <i>Kent Wessel</i>	Date: 8-23-95	Received by: (Signature) <i>J. S. Strelak</i>	Date: 8-23-95	Relinquished by: (Signature)	Date:	Received by: (Signature)	Date:
Company: TRW	Time: 3:15	Company: CKY	Time: 3:15	Company:	Time:	Company:	Time:

Storage/Disposal of Samples: Sample will be stored at CKY for 30 days at no charge and at \$10/sample/month thereafter. Disposal of sample by the Laboratory will be charged at \$10/sample.